

#### Idaho Department of Environmental Quality Waste Management & Remediation Division Solid Waste Program State Office

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# Frequently Asked Questions: Municipal Solid Waste Landfill Approval

#### Q. Is DEQ involved in the site selection for landfills?

A. Site selection for new landfills is the responsibility of the county. Idaho Code provides counties the authority to establish and develop solid waste disposal systems. Once a site is identified, the site should be evaluated based upon the siting criteria contained in the <u>Idaho Solid Waste Facilities Act</u>, <u>Title 39</u>, <u>Chapter 74</u>, <u>Idaho Code</u>. Once the landfill owner or operator determines the site meets the criteria, an application with supporting documentation is submitted to DEQ. The approval process is outlined in <u>39-7408</u>, <u>Idaho Code</u>. DEQ is not involved in selecting a landfill location.

#### Q. Who approves new landfills or expansion of existing landfills?

- A. Several different approvals are required before a municipal solid waste landfill can accept waste
  - Site certification is the first approval required. The site must be certified by DEQ before construction can begin.
  - The next step is to receive design approval. Landfill design includes a liner and leachate collection system. Ground water monitoring is a separate section within the regulations, but is typically included in the design plans as part of this approval. DEQ reviews and approves/disapproves design and ground water monitoring plans.
  - Operating plan approval is also required prior to landfills accepting waste. Operating
    plans describe how a landfill's daily operations are conducted. Operating plans are
    reviewed and approved by the local District Health Department.
  - The last approval is for the Closure and Post-Closure Care Plan. These plans describe how the facility will close and how the facility will be maintained after it is closed. This approval is also the responsibility of the local District Health Department.

#### Q. Can DEQ require a specific solid waste management strategy?

A. State law authorizes the county commissioners to acquire, establish, maintain and operate solid waste disposal systems as are necessary and to provide reasonable and convenient access to such disposal systems by all the citizens of the county.

When deciding on a strategy for managing solid waste, many factors need to be considered. Finding a suitable solid waste management facility site, costs for transporting waste and recyclable materials to a management facility, distance resident must travel to dispose/recycle materials, costs to obtain land, design, construct and maintain the management system, and residents willingness to use the system are a few of the factors to consider. Management strategies may be as simple as operating a transfer station with the waste shipped out of the county to a more complex system including recycling, composting, a household hazardous waste collection facility, transfer stations and shipping waste to a landfill.

DEQ's role is to ensure that the management strategy selected complies with applicable regulations within DEQ's authority.

# Q. What is the difference between a municipal solid waste landfill and other types of landfills?

A. Federal regulations define a municipal solid waste landfill as a landfill that receives waste from households and similar living quarters such as hotels, motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds and day-use recreation areas. Municipal solid waste landfills also may receive other types of waste such as non-hazardous commercial or industrial waste, non-hazardous sludge and conditionally exempt small quantity generator hazardous waste. Other types of landfills include industrial waste landfills or construction & demolition landfills. Non-municipal solid waste landfills are regulated under different state regulations.

#### Q. What regulations apply to municipal solid waste landfills?

A. Municipal solid waste landfills must comply with state requirements that are based upon federal law and regulations. State of Idaho requirements are contained in <a href="Title-39">Title-39</a>, Chapter 74, Idaho Code (Idaho Solid Waste Facilities Act). Federal regulations are contained in <a href="40">40</a> CFR Part 258</a>. For the most part, Idaho's requirements mirror the federal requirements. These regulations contain requirements for siting, design, ground water monitoring, operating, closure/post-closure and financial assurance and corrective action. The state of Idaho obtained authority to oversee the municipal solid waste landfill program from the U.S. Environmental Protection Agency (EPA) in September 1993.

### Q. If a landfill meets the siting criteria within the regulations, can DEQ still disapprove the landfill?

A. The siting criteria established within state regulations are the minimum requirements a site must meet in order to be certified. DEQ's review of the siting application is to determine whether the applicant has demonstrated that the site meets these minimum requirements. In certain situations, additional documentation is needed to make a determination. If the applicant demonstrates that the site meets the minimum criteria, the site will receive certification from DEQ.

#### Q. How is the public involved in the approval of a municipal solid waste landfill?

A. Each of the required approvals has a public review process. Once the applicant has submitted the application, a notice is published in the local newspaper informing residents that an application has been submitted, the location of the application available for public review, and where to submit comments on the application.

#### Q. What are the design requirements for a municipal solid waste landfill?

A. Municipal solid waste landfills are required to design and construct landfills with a liner and leachate collection system. The regulations stipulate a specific two-component liner, but an alternative liner may be used if the alternative liner is equally as protective. The purpose of the liner is to keep all liquids within the landfill and prevent contamination of ground water. The leachate collection system collects the leachate and then sends this liquid to either a pond or a treatment process. The leachate collection system is designed to prevent a build-up of the liquid on the liner that could result in head pressure pushing the liquids down through the liner. A ground water monitoring system is also installed that monitors ground water up gradient and down gradient from the landfill.

#### Q. What types of air quality concerns are associated with a municipal solid waste landfill?

A. One of the first air quality issues most people associate with a landfill is odor. All landfills generate some level of odor due to the garbage and biological activity that starts to decompose the waste. A basic operating practice required to reduce odor is the application of daily cover. The cover is typically six inches of dirt or other approved alternate daily cover. Landfills are also required to prevent run-on from precipitation. Limiting liquids in a landfill reduces the biological activity that helps reduce odor.

Although these activities limit decomposition, all municipal solid waste landfills produce methane and other gases. Methane can also present an explosive situation if concentrations exceed certain levels in buildings and other structures. To ensure levels are not exceeded, methane concentrations are monitored around the landfill. EPA also classifies methane as a "greenhouse gas" that is thought to contribute to global warming. Landfills with emissions greater than state air quality regulations are required to install control equipment.

#### Q. How is water quality protected from municipal solid waste landfills?

A. Owners and operators of municipal solid waste landfills must protect both surface water and ground water. During the siting process, owners and operators must ensure the planned facility does not have a negative impact on flood waters and ensure proper setbacks from streams, rivers, lakes, ponds or other surface waters. In addition, the site must meet certain geologic conditions such as setbacks from Holocene faults, seismic impact zones or unstable areas that could threaten the integrity of the design and thereby affect ground water.

Larger municipal solid waste landfills also must install liners, leachate collection systems and ground water monitoring systems. The liner prevents any liquid in the landfill from migrating down to ground water. The leachate collection system prevents a build-up of liquid on the liner. The leachate is collected in lined ponds or sent to a wastewater treatment plant.

Municipal solid waste landfills also must control storm water run-on and run-off. The storm water run-on is controlled to prevent additional liquid from entering the landfill. Storm water run-off is controlled to prevent impacts to surrounding surface water. Any water from the landfill site that is discharged to surface water may need a National Pollutant Discharge Elimination System (NPDES) Permit from EPA.

# Q. Once the landfill is built and accepting waste, who ensures the landfill is operated properly?

A. Before the landfill accepts waste, the landfill owner/operator must submit and gain approval from the local District Health Department for an operating plan that demonstrates compliance with the regulations. The local District Health Department inspects the facility to ensure compliance with the operating plan and state regulations. In addition, state regulations require a comprehensive inspection every three (3) to five (5) years. The comprehensive inspection is conducted jointly by DEQ, the local District Health Department, the county, and the owner/operator to ensure compliance with state regulations. Through state regulations, DEQ has authority to enforce these requirements.

#### Q. What happens once a landfill is full or no longer accepts waste?

A. Once a landfill is full or decides to no longer accept waste, the owner/operator must start the closure process. This process is contained in the landfill's closure plan that is reviewed and approved by the local District Health Department prior to the landfill operating. The closure plan identifies the type of cap that will be placed over the fill area to prevent precipitation from seeping into the waste, vegetative cover that assists with the precipitation and wind and water erosion of the cap.

Once the closure activities are complete, the landfill cap, ground water monitoring and leachate collections must be maintained for an additional 30 years. The owner/operator is required to fix any cracks and maintain the depth of the cap, maintain vegetation, continue monitoring the ground water, and ensure the leachate collection system is operated to prevent head build-up on the liner. Access control to the site is also required based on the use of the site after closure.

#### Q. Once the landfill is closed, what types of land uses are allowed?

A. Uses of the land vary depending on the size, location, amount of upkeep and many other site-specific factors. Some sites are not used at all to prevent access to the monitoring wells, leachate collection system and other control equipment, while other sites are used to graze livestock. Closed landfills also have been used for public recreation such as hiking/biking areas, public parks or golf courses as well as other similar uses.

In situations where the public has access, steps need to be taken prevent access to the control equipment and to control landfill gas emissions. Another important issue to consider is percolation from water applied to establish and maintain plant growth on the cap. If areas with grass or other vegetation need additional water other than natural precipitation, the cap will need to be designed to account for this additional water. In any use, the integrity of the cap must be maintained.

## Q. Are landfill owners and operators required to demonstrate financial ability for the landfill?

A. State regulations require the owner or operate to demonstrate the financial ability to close the landfill and maintain post-closure care in accordance with the facility's approved Closure and Post-Closure Care Plan. The Financial Assurance Plan is based upon the cost for a third party to complete the closure and post-closure requirements as specified in the approved plan. If the facility is undergoing corrective action, the cost to complete the corrective action activities also must be included.

State regulations allow several mechanisms to demonstrate financial assurance including a trust fund, surety bond guaranteeing payment or performance, insurance, corporate financial test, letter of credit, corporate guarantee, local government guarantee, or local government financial test. The Financial Assurance Plan is submitted each year to DEQ to ensure the costs accurately reflect the current costs for closure.